LETTER / Obstetric imaging

Lithopedion developed in a non-communicating rudimentary uterine horn: CT features

Keywords Calcinosi; Diagnostic imaging; Fetal death; Lithopedion; Ectopic pregnancy

Dear Editor,

Lithopedion, or stone child, is a rare condition that corresponds to a retained and calcified dead fetus [1–3]. We report herein a case of lithopedion developed in a non-communicating rudimentary uterine horn, tolerated for eighteen years.

A nulliparous, 36-year-old African woman complained of chronic pelvic pain and infertility. On further questioning she mentioned she had developed signs and symptoms of pregnancy approximately eighteen years before in Africa, which ceased without delivery or expulsion. She did not seek medical attention at that time. Physical examination revealed an enlarged uterus with a contiguous right-sided pelvis mass. Serum hCG level was 75 IU/L and ovarian tumor markers were negative. CT of the abdomen and pelvis (Fig. 1) demonstrated a large right latero-uterine mass (120 × 105 × 95 mm) of mixed soft-tissue and cystic attenuation, surrounded by a partially calcified membrane and containing macro-calculcations suggestive of fetal bones. These findings suggested the rare diagnosis of lithopedion. An exploratory laparotomy was undertaken. After extensive and laborious adhesiolysis, a partially calcified cavitated mass filled with thick, yellowish fluid was extracted. It contained the complete skeletal remains of a fetus. Histologic examination of the cavitated mass identified it as a uterine horn, composed of smooth muscle surrounded by a layer of fibrosis with foci of calcification, granulation tissue and necrosis. Femur length was 75 mm, suggesting that the fetus was full-term. From the clinical, radiologic and histologic findings, it was concluded that this was a case of lithopedion developed in a non-communicating rudimentary uterine horn, tolerated for eighteen years.

The presented case is a rare phenomenon with only approximately 330 reported cases in the literature [1]. Lithopedion, which derives its name from the ancient Greek for stone (lithos) and child (paidion), designates the calcified remains of a fetus that has been retained following its demise during an ectopic pregnancy. Most cases are asymptomatic and identified incidentally on imaging studies. This condition is classified into three subgroups including lithokelyphos, lithokelyphopedion and true lithopedion [4]. Lithokelyphos corresponds to calcification of the fetal membranes. The fetus may be skeletonized but the fetal soft parts are not involved in the process of calcification. Lithokelyphopedion corresponds to calcification of the membranes and the fetus. True lithopedion corresponds to calcification of the fetus only. In our case, the fetus was skeletonized and surrounded by a calcified shell. It can thus be classified under the type known as lithokelyphos. A PubMed search using the terms "lithopedion", "lithopaedion", "lithopaidion", "lithokelyphos", "lithokelyphopedion" and "rudimentary uterine horn" revealed only six cases of lithopedion originating in a uterine horn. Of the 114 cases of lithopedion collected by Tien, five originated in the horn of a bicornuate uterus [2]. Acharya and Barnick reported the case of a term fetus retained in a non-communicating rudimentary uterine horn for 5 years which eroded into the transverse colon [3].
Imaging and operative findings of lithopedion (lithokelyphos) in a 36-year-old African woman complaining of chronic pelvic pain and infertility. A. Computed tomography (CT) image in the transverse plane shows a large pelvic mass with an incomplete rim of calcification (arrow) containing several disorganized fetal bones (extremity long bones, scapula, ribs). B. CT image in the sagittal plane shows skeletal calcifications of several fetal ribs (black arrow) within an irregularly calcified membrane (white arrow). C. Intraoperative photograph shows resection of the pelvic mass. D. Postoperative photograph of the arranged fetal bones.

Disclosure of interest

The authors declare that they have no competing interest.

References


